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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,787	08/08/2006	Takamasa Harada	514453-3966	7575

7590 04/24/2007

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EXAMINER	
SHALLENBERGER, JULIE A	
ART UNIT	PAPER NUMBER
2885	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,787	HARADA ET AL.	
	Examiner	Art Unit	
	Julie A. Shallenberger	2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 7 recites the limitation "the angled end" in line 3.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon (6,729,737) in view of Harada (JP 2003-202415) and further in view of Funamoto (JP 11-250714).

Jeon teaches a surface light source device with a light guide 140 with a prism pattern (reflecting surface) and a reflection surface 150, and a diffusion sheet 160, but lacks the teaching of a diffusing film with a columnar structure of 2 phase refractive indices at inclined angles between 5 and 60 degrees or a point light source.

Harada teaches a diffusing film with a columnar structure of 2 phase refractive indices which, vary gradually [0022] at inclined angles between 5 and 60 degrees [0010].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Harada's diffusing film in place of Jeon's diffusing film in order to improve the brightness so that a wider viewing angle may be obtained.

Funamoto teaches the use of a point light source that is positioned in the center of the end surface of a light guide.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a point light source in order to provide a longer lasting light source and to increase the power efficiency of the lighting device.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon, Harada, and Funamoto, as applied to claim 1 above, in view of Shigematsu (JP 2003-075611).

Jeon, Harada, and Funamoto teach the invention described above, but lack the teaching of a light diffusing adhesion agent with microparticles.

Shigematsu teaches a light diffusing adhesion agent with microparticles.

The use of adhesives are well known in the art and providing such a medium between the diffusing film and the light guide is common since the air layer would decrease the overall efficiency, therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive taught by Shigematsu to bond the diffusing film to the light guide in order to increase efficiency of the surface light source device.

In regard to the particle size and refractive indices, Shigematsu teaches the use of non-sublety particles with a diameter of 1-5 micrometers (cl. 2), another example of

titanium oxide with a refractive index greater than 1.8 and diameter of 10-50 nm (cl. 3), and a further mentions the refractive index of non-subtlety particles may exceed 1.6 (cl. 4). These particle sizes and refractive indices are all well known in the art and It would have been obvious to one of ordinary skill in the art at the time the invention was made to use in the adhesive in order to increase the light diffusion and overall efficiency of the surface light source device.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon, Harada, and Funamoto, as applied to claim 1 above, in view of Karanaru (JP 2003-121656).

Jeon, Harada, and Funamoto teach the invention described above, but lack the teaching of the light emitting unit positioned facing an angled end surface of the light guide and the directional light-diffusing film being directed towards the angle facing the light emitting unit.

Karanaru teaches a light emitting unit positioned facing an angled end surface of the light guide and the directional light-diffusing film being directed towards the angle facing the light emitting unit see figures 1, 2, and 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to position the light source at an angled edge of a light guide as taught by Karanaru with the light-diffusing film directed towards an angle facing the light emitting unit in order to optimize the diffusion of light throughout the light guide.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamashita (7,004,610) teaches a similar light diffusing film.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie A. Shallenberger whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Sember can be reached on 571-272-2381. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS
AU 2885

Thomas M. Sember
Primary Examiner